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The Endogamy of the Populations of the Senegalese Fouta
[L'Endogamie des Populations du Fouta Sénégalais]

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[Title page]

114 /665/ The study of demography in the countries of Black Africa has made great progress in recent years. Nevertheless, it has often had to be limited to monographs because of the diversity of the ethnic groups and the lack of census statistics.

Among the questions to be studied is that of consanguinity, often in these regions and sometimes responsible for demographic stagnation and an unhealthy condition. It is in this direction that the activity of Dr. Cantrelle of the Institut français d'Afrique noire /French Institute of Black Africa/ is oriented. The high degree of endogamy among the populations that he has studied is given particular attention. The results presented here deal with the Senegalese Fouta and are to be followed by more complete data pertaining to the Fouta Djallon.

Introduction

133 The Senegal River separates the republic of Senegal from that of Mauritania. Its central valley, running from east to west, between Dembakané upstream and Dagana downstream, constitutes a region defined by history and geography, the Fouta Toro. This is a long alluvial strip more than 400 kilometers long by ten kilometers wide on the average, hemmed in by two semi-arid regions, the Mauritanian Sahara on the north and the Ferlo of Senegal on the south (Map No. 1). In contrast
161 to these two regions, in which lives a population of nomadic shepherds, very low in density, the fertile valley has a concentration of farmers, fishermen, and livestock-raisers, with a relatively great density of about 20 inhabitants per square kilometer downstream, 35 near the center, and reaching 50 upstream.

143 Like most of the large valleys, it is a zone of passage which in the course of previous centuries has mixed together populations of varied origin, and one can assume that this region of homogeneous appearance, and where Islam is the sole religion, has created conditions favorable to panmixia (1).

1. Panmixia: assemblage of hypotheses

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143 used in population genetics for the construction of models indicating the mode of evolution of a concentration of genes in the course of time. In this general hypothesis it is postulated that: the population is closed; marriage is random; fertility is the same for all couples. If in this case the population is unlimited, the frequency of the three varieties of zygotes, A/A, A/a, a/a (monohybrid diallel), remains constant from generation to generation (Hardy-Weinberg Law, N. D.L.R.).

/666/ /Map No. 1 appears here./

143 582 The actual situation is entirely different; the social stratification entails very strict endogamy at the ethnic and caste level, endogamy reinforced by preferential marriages as well as by residential proximity. Some authors (1), Soh [1], Gaden [2], M'Bow [3], have already described the origin and causes of these local ethnic and social differences and also the types of marriages, but quantitative observations only permit one to measure endogamy. After reviewing the method of study used, we shall indicate the principal results of these observations.

1. The numbers in brackets refer to the bibliographic references at the end of the article.

128 143 Method of study. In Europe, and notably in France, consanguinity and geographical endogamy have been determined by means of the frequency of marriages from the third to the sixth degree inclusive, that is to say, especially between first and second cousins, and also by studying the distance between the domiciles of future spouses. It is possible to know the frequency

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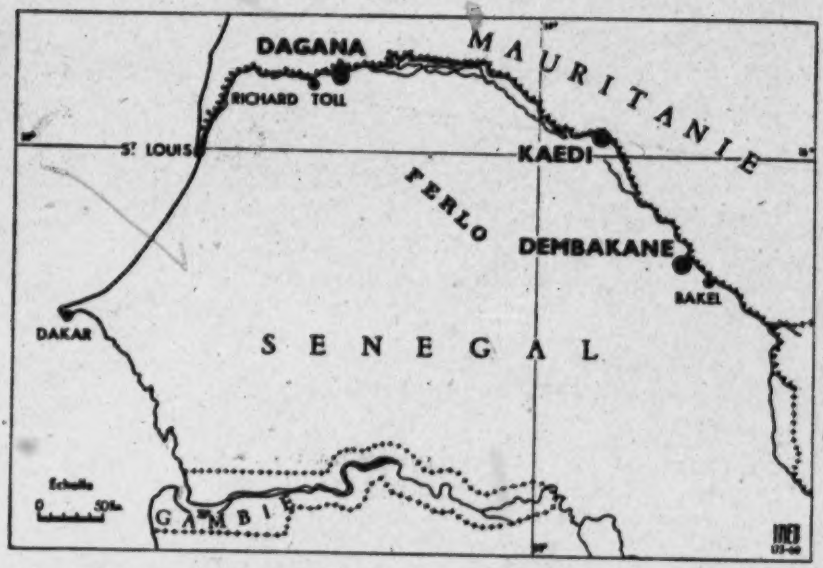

Map No. 1. /Mauritanie = Mauritania; Gambie = Gambia; eschelle = scale./

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143 and variation of these facts with regard to dates and regions, thanks to various registers which have existed for several generations (Sutter and Tabah [4] and [5], Sutter [6]).

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143 In the western part of Africa it is difficult to gather this kind of information, which the administrative censuses do not normally give. The first quantitative study of endogamy by M. de Lestrange in Guinea among the Coniagui [7] has permitted an evaluation of the size of the isolate, one woman /667/ being able to choose her partner from among 400 to 500 men, but does not specify the frequency of consanguineous unions. It deals with a closed population limited to 8,000 persons.

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125 The population of the valley of the Senegal itself is much more extensive and, in principle, not closed. In this case a demographic inquiry by sampling, taking one out of ten, has been resorted to, which made it possible to establish, in 1957, not only its classic characteristics of structure (sex, age, ethnic affiliation, place of birth, etc.) and of natural change (fertility, mortality), but also elements permitting precise determination of its degree of endogamy.

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125 such as caste and the degree of kinship of each actual union [8].
[143] In this region the person questioned, mostly in public, did
[565] not make any difficulty about declaring to which caste he be-
[124] longed. Moreover, this is known by all the inhabitants of the village and has such social importance that if one asks a child in the street, "Who are you?" he replies, "I am of such and such a caste." As for the degree of kinship of the spouses, a previous study among the sedentary Peul of the Fouta Djallon [9] has shown that it was possible to obtain this without a cumbersome demographic investigation; the individuals are well acquainted with the fact in regions where consanguineous unions are the custom.

The investigator asks whether or not the woman is married to a near relative, and, in the case of an affirmative answer, if the spouses have the same grandfather or grandmother (fourth degree) or in what other way they are related. A total number of 6,208 married women were questioned in this manner, and in order to correct possible errors of observation in such a sample, a control was established in a subsample of 382 sedentary couples by noting the names of the parents, grandparents, and eventually great-grandparents. At this stage there is uncertainty, but this can be removed only by laboriously working out genealogies. That is why the proportion of marriages to the sixth degree, which we indicate below and which are beyond the kinship ties known with sufficient accuracy, are perhaps more important in reality.

563 The ethnic groups. The region studied contains 341,000 inhabitants divided into five principal ethnic groups: Moors, Toucouleur [Tukulor], Peul, Saracolé [Sarakole], and Wolof (Table I). The ethnic groups are distinguished by such characteristics as the way of life, social structure, group consciousness,
[186] the name given them by other groups, and language, except for
[197] the Peul and the Toucouleur, who speak the same language,
[361] Poular. Aside from the Moors, the population is grouped in five port cities and 800 villages and communities.

[162] The Toucouleur form the largest aggregate (187,000 persons) and occupy the center of the region on the two rivers. The

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563 term Toucouleur often erroneously designates all the inhabitants of the Fouta Toro; we shall use it here in the way the Toucouleur speak of themselves, namely, Halpoularen (speaking the lan-
[197] guage of the Peul), distinct from the Wolof, who have their own language, and from the Saracolé, who speak a Mandé dialect.

/668/ Downstream the boundary between the Wolof and the Toucouleur is not clearly defined and several Wolof villages have been established in the very heart of Toucouleur country and
[186] have preserved their ethnic individuality. They are regarded as foreigners. It is the same upriver on the part of the Saracolé.

The Peul live in the midst of the three groups mentioned
[175] above, and the Peul ethnic group in the valley of the Senegal is itself composed of several waves /nappes/ which have successively spread throughout the region. The oldest are also the most sedentary and the most Islamized (Foulbé walo) and have a way of life very much like that of the Toucouleur, with whom they sometimes intermarry. The others, who have come more re-
[221] cently (Foulbé Diéri), are seminomads and only in winter culti-
[162] vate the sands of the hills which border the valley (Diéri). There
[613] is a total of 47,000 Peul in this region, but we do not know the
[175] actual number of each wave, itself divided into relatively endogamous lineages /lignages/ or pseudo-lineages. The latter, designated by the administration as communities, served as census units for the Peul, while for the others this unit was the village. The location of these communities often changes because of the seminomadic character of the Peul way of life, which is devoted principally to livestock-raising.

[162] Among the 56,000 Moors, although some of them (6,000) are settled in the river ports, the majority merely meet on the Mauritainian shore and only part of the year; they camp there
[221] during the dry season in order to cultivate the alluvial soil (walo), and they return after the harvest to camps sometimes located several dozen kilometers from there. These farmers for the most part are Haratin of the black race, that is to say, ancient serfs of the Moors, from whom they continue to lease land.

125 Since they occupy a very marginal position in relation to the totality of the inhabitants of the valley, they will not be studied here. /Table I appears here./

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162 Table I. Division of the population of the Senegalese Fouta according to ethnic groups.

Ethnic Group	Actual Number	Percentage
Toucouleur	187,000	54.8
Wolof	36,000	10.6
Saracolé	13,000	3.8
Peul	47,000	13.8
Moor	56,000	16.4
Miscellaneous	2,000	0.6
Total	341,000	100.0

582 563 The ethnic groups are relatively endogamous, because marriages between persons of different ethnic groups are very rare, except perhaps, as we have seen, between Toucouleur and Peul (Foulbé walo). The Toucouleur /669/ are the only group entirely 563 within the Fouta, aside from some fractions that emigrated in the [166] course of religious crusades into Macina, Boundou, and elsewhere.

Each of the other ethnic groups is merely an extension into the valley of a group whose bulk occupies the neighboring regions, the Wolof in the northern part of Senegal, the Saracolé in western Sudan, the Peul near the Ferlo and the Assaba. But each of these ethnic groups is itself divided into several populations: the castes.

565 [582] Castes and social conditions. The castes, in reality, present a matrimonial barrier more difficult to overcome than that of ethnic affiliation. The term "caste" is used here in the general sense of social class, exclusive in nature, and not in the sense [564] that is given it in the valley where the term is reserved for artisan castes.

[567] Social conditions first of all distinguish the captives from [422] the free men. The captives are regarded as the personal property

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567 of the masters and are married by them. They have no property
565 rights nor a voice in the village councils, being constrained to
422 menial work. This condition cannot be compared to that of the
421 slave of the two Americas in former times; it is more reminiscent
623 of that of bondage in the Europe of the Middle Ages. Before the legal suppression of this custom a certain number of captives had already been freed, but the prejudice against these people remains, and they constitute, in fact, the inferior caste in the social hierarchy.

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564 It is the hereditary work of the artisans that, properly speak-
463 ing, distinguishes the men of the castes from the others: work in wood, leather, metal, and cotton thread. This distinction is transmitted from father to son, whatever calling is actually practiced. A captive may practice weaving, but he will never belong to the caste of weavers; conversely, a man belonging to the caste of jewelers may be a doctor of medicine and practice the profession of medicine.

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582 Marriage most clearly distinguishes the social barriers which
565 the child inherits from its father. Although there is no rigid interdict, there is such ostracism that it is practically impossible for a man to marry a woman of an inferior caste without risking loss of status and being banned from society. There is one exception:
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567 it may happen that a master marries his captive in order to have children who are free; the mother will be set free by this act, but if the union is sterile the woman remains in the condition of servitude.

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565 The system of castes is still very much alive, especially among the Toucouleur, and actually divides the ethnic group into partial populations, which, however, are less numerous than in India.

The functional nature of the castes has brought about in the course of their history the appearance of a hierarchy. Among the Toucouleur there are first the free men (rimbê), not belonging to the trade castes, and among /670/ whom, at the head, are the torobé (singular, torodo). Originally, in the Fouta Toro, this word in Arabic designated a scholar, a propagator of Islam. It

1 [i.e., The captives -- Analyst]

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565 has been the dominant class since the Islamic revolution. In former times many strangers from neighboring countries would come to follow the teachings of the marabouts, to settle around them, and, thanks above all to Islam, to join this caste, which at present seems more closed and now tends to be less heterogeneous.

The social stratum which comes next is that of the tiédo and the thioubalo. It is believed that their ancestors were the first occupants of the soil, and they have preserved their traditions, the tiédo as farmer and the thioubalo as fisherman. The caste of fishermen is quite closed and has its own hierarchy with its
S captives, its free men, and its dynasty.
582 The tiédo caste sometimes intermarried with the fishermen
565 and the torobé. Also free, but of an inferior social rank, are the trade castes. The general name for them, "gnégno," indicates a relationship of dependence vis-à-vis the above castes. Wood-cutters (labo), blacksmiths (baïlo), shoemakers (saké), and weavers (mabo) in principle intermarry indiscriminately. In contrast, the griots (gaoulo), who specialize in the singing of praises, marry only
S among themselves and sometimes with the blacksmiths.
565 Finally, at the bottom of the social hierarchy is the group
569 of captives and former captives. There is a distinction between the freed (gallounké) and the captive (mathioudo), but they are in fact united by the same prejudice which the other castes have with regard to them.

S The social structure of the other ethnic groups is of the same
565 type as that of the Toucouleur, with the exception of a few details; for instance, the diawando was originally the attendant or the courtier of the large Peul families and seems to form a differentiated caste at present. The caste of fishermen does not exist among
W the Peul, for they do not fish, or among the Wolof all of whom
[565 can engage in fishing.
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S If we limit ourselves to the Toucouleur group, the only
582 one for which we know the actual number in the valley, we shall
143 be able to estimate the numerical importance of the various endogamous groups and consequently the number of women with whom marriage is possible (Table II). For certain castes, few in number, such as those of the artisans, the results of the sampling,

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582 however, permit only an approximation.
143 Be that as it may, an examination of the figures of Table II shows some very important numerical differences between one group and another, since for each of the 11 groups, the actual number varies from 1,100 individuals to 84,200, and that of the women from 15 to 45 years of age from 250 to 18,700. This fragmentation of the population into isolates by
S 7 [565] the system of castes is particularly noticeable on the artisan level where the average actual number does not exceed 2,000 persons. By this mechanism a high degree of endogamy is maintained, which determines some important phenomena. It is easily seen, for example, that the phenomena /671/ /Table II appears here/ of genetic drift (1) have acted in the course of time

> 1. Genetic drift: in the case of a population of limited number the frequency of a given gene may drift randomly, in the course of generations, within the range of possible values, contrary to that which occurs in panmixia, where this frequency remains constant (N.D.L.R.).

so as to promote the disappearance or, on the contrary, the appearance of certain morphological characters and their retention in these partial populations.

S Proximity of residence. The conditions noted above are
582 aggravated by the fact that the Toucouleur country stretches in
143 a strip of land of about 300 kilometers; such a great distance greatly decreases the chances of marriage between individuals from distant residences, and the figures we have just given are therefore reduced to those of surrounding villages.

S This is perhaps in part the reason for the regrouping in
[565] certain regions of a less numerous endogamous group such as that of the griots.

As in all countries, distance actually plays an important
S part in the possibilities for marriage. We shall not study this
[565] phenomenon here, for within a given caste the radius of marriage

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Table II. Actual number of the endogamous Toucouleur groups, with, for each one, their percentage in relation to the total population, and the number of women from 15 to 45 years of age

Caste	Actual Number	%		Number of women from 15 to 45 years of age	
Torodo	84,200	45.0			18,700
Tiédo	13,700	10.0	74.0		7,150
Thioubalo	32,200	17.2			4,150
Diawando	3,400	1.8			
Labo	2,100	1.1		450	
Saké	1,100	0.6	4.5	250	1,850
Mabo	2,300	1.2		500	
Baflo	2,200	1.6		650	
Gaoulo	2,100	1.1	1.1	450	1,100
Gallounké	5,800	3.2	20.4	1,300	8,450
Matioudo	32,200	17.2		7,150	
Total	187,000	100.0		41,900	

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582 does not actually express the probability of a union between two
143 individuals of a given domicile, since this schema is distorted
[565] by preferential marriages. Nevertheless, in a rural environment, the census according to place of birth shows that 84.2% of the women from /672/ /Table III appears here/ 15 to 45 years of age, most of whom were married, were born in the village of their residence. The men, therefore, in the majority, marry women from their own village.

Preferential marriages. To the probability of unions between individuals of a close degree of kinship in the groups already restricted is added the preference for these same marriages, which extends the endogamic system of castes. But if the ethnic group and the caste determine a negative choice, certain variables bring about on the contrary, a positive choice, chief of which is the customary preference for unions between close relatives, in particular between first cousins. The inquiry showed that in the whole of the zone studied (Haratin Moors not included) the proportion of marriages of the fourth, fifth, and sixth degrees rises to almost 28% of the total. The figure varies according to the ethnic groups, as is indicated in Table III.

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[582] The percentage of marriages between first cousins (fourth degree) in fact extends from 10.1 among the Wolof to 16.8 among the Saracolé; between cousins of an uneven degree (fifth
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[582] degree) the percentage goes from 2.2 among the Saracolé to 7.1 among the Wolof, and between first cousins (sixth degree) from
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[582] 10.5 among the Toucouleur to 14.5 among the Peul. Among the Toucouleur and the Peul there are practically as many marriages between first cousins as between second cousins: 10.4% as against 10.5% in the one case, 14.5% and 14.5% in the other.
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[582] Only the Wolof have more marriages between second cousins, 13% as against 10.1%. Among the Saracolé, the more numerous unions between first cousins (16.8%) than between second cousins (10.9%)
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T confirm what is known about family cohesion in this group.
582 Within each ethnic group the frequency of cansanguineous
143 marriages varies more noticeably according to the castes. In
565 Table IV we have assembled the absolute numbers of consanguineous

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Table III. Percentage of consanguineous marriages according to the degree of kinship in the different ethnic groups in the valley of the Senegal. Value of the mean coefficient of consanguinity

Ethnic Group	Number of women interrogated	% of consanguineous marriages according to degree of kinship			Total	Mean Coefficient of consanguinity $F \times 10^3$
		4th D	5th D	6th D		
Toucouleur	3,865	10.4	4.2	10.5	25.1	7.6
Peul	1,135	14.5	6.8	14.5	35.9	12.2
Wolof	731	10.1	7.1	13.0	30.2	9.5
Saracolé	270	16.8	2.2	10.9	29.9	12.7
Total	6,208	11.3	5.0	11.3	27.6	8.7

S T 582 143 565 marriages and their percentages in the four principal castes of the Toucouleur. The percentage of these marriages /673/ /Table IV appears here/ varies from 10.7 among the captives to 44.4 among the artisans; the figure increases among the fishermen to 32.2 and to 35.6 among the Torobé. The relatively weak proportion observed among the captives (10.7%) is due to the fact that the latter came from different regions, according to the accident of wars, but it shows that they have nevertheless adopted the custom of their masters.

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S 582 143 The customary nature of these marriages is shown by the fact that certain types of unions between cousins are preferred to others. The number of marriages of the fourth degree, the type of which we have noted, although small (47), nevertheless tends to confirm the preference for marriages with the daughter of either

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Table IV. Absolute numbers of consanguineous marriages and their percentage in the principal Toucouleur castes. Value of the mean coefficient of consanguinity

Caste	Number of couples interrogated	Consanguineous Marriages 4th D Nos.	5th D Nos.	6th D Nos.	Total Nos.	Total %	Coefficient of cansanguinity F X 10^3
Torobé	101	15	6	14	35	35.6	10.9
Fisher-men	56	8	4	6	18	32.2	8.2
Artisans	27	7	1	4	12	44.4	13.6
Captives	93	6	0	4	10	10.7	4.2

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the mother's brother (19) or the father's brother (15), rather than the daughter of the mother's sister (8) or of the father's sister (4). These consanguineous marriages represent the most strict form of endogamy. The others reflect the same tendency, but are practiced in a larger framework, lineage, clan, the extent of which we have not been able to evaluate. There are also traditional unions between two or more families, which perpetuate themselves from generation to generation.

Actual endogamy. The results observed in the valley of the Senegal cannot be extended to the Sahelo-Sudan region and still less to the western part of Africa. From analogous studies now in progress, we shall soon know whether the situation is comparable in the other regions of the Senegal and the Sudan.

In the valley the frequency of marriages of the fourth to the sixth degree inclusive ranks among the highest yet observed anywhere in the world. Freire-Maia in 1957 [10] collected data on this point, followed by Serra and Soini in 1959 [11] in this same journal. The measure which gives the best

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584 representation of the degree of endogamy in a population is the
143 mean coefficient of consanguinity (1). Its value, multiplied by
[128]

1. The mean coefficient of consanguinity of a population represents the probability that two homologous loci of an individual taken at random in the population under consideration are identical. Two analogous conclusions exist in the literature on genetics: the coefficient F of Wright and the a of Bernstein. For more details, see Serra and Soini, Population, 1959, pp. 70-72 (N.D.L.R.).

1,000, has been reported /674/ here in Tables III and IV for each of the partial populations studied. It is a little less than one would have expected from the frequency of consanguineous marriages. If there is, in fact, a not insignificant number of double cousins among the spouses, one also finds an important
[595] number of cousins descended from half brothers or half sisters. Nearly one-half of the consanguineous unions concern individuals of this category because of the frequency of successive and simultaneous unions (polygamy).

For the whole of the ethnic groups studied (Table III), its value reaches 8.7, and for each of the specific ethnic groups: Toucouleur 7.6; Wolof 9.5; Peul 12.2; Saracolé 12.7. For the Toucouleur castes (Table IV) one finds the following values: captives 4.2; fishermen 8.2; torobé 10.9; artisans 13.6.

143 Comparisons with other countries. The highest coefficient found up to now, 24.08 (Ishikuni and Coll., 1960 [12]) concerns a Japanese island, Hosojima, populated by 125 inhabitants, which thus represents a very small isolate and is mentioned only incidentally with reference to the demographic conditions in which most human populations live.

In order to appreciate the high endogamic level of the valley of the Senegal, let us emphasize that one finds analogous figures for the present day only in Brazil (Freire-Maia,

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143 1957 [13]): diocese of Oeiras in the state of Piauí, 9.67 for 1,931 marriages in 1954; diocese of Petrolina in the state of Pernambuco, 8.3 for 3,063 marriages in 1950, etc. These figures are exceptional for this country. Very often the value of the coefficient in each diocese is below 1.

Even the castes of India do not furnish comparable figures: 1.3 among the Desasth Rigvedi Brahmans; 2.8 among the Gaud Saraswat Brahmans; 6.35 among the Marathas. Nor even a closed tribe like the Ramah Navaho of the United States: 6.6. In Japan where a strong endogamy persists, the figures found so far are between 2.8 and 3.6.

In the countries of Europe, since the breakup of the isolates took place, the value of the coefficient is everywhere less than the unit. In the French provinces it varies at the present time between 0.1 and 0.9.

For the African populations the data are still very scarce. As far as we know, only Roberts, 1956 [14], has given figures for three Dinka groups from the valley of the Nile to the Sudan: 1.53, 0.96, 0.49. These figures are very far from those for the valley of the Senegal. Nevertheless, Tanner, 1958 [15], in an Islamic community of Tanganyika, has found a rate of 37.8% for marriages between cousins, which should correspond to a mean coefficient of consanguinity bordering on those reported here.

582 143 Evolution. The inaccuracy of historical knowledge makes it impossible to say whether the endogamic state described has always been so important, but one may assume that the present situation will be modified in the years /675/ to come. Several factors could play a part in an evolution toward exogamy, for example, migrations, the size of families, social barriers.

The role of migration is negligible here, for even though [166] the Wolof and the Saracolé have founded some villages of foreigners within Toucouleur country, the Fouta is now a country of active emigration toward urban centers like Dakar. The average size [162] of families is probably increasing because of the prolongation of the average length of life, which tends to increase the possibilities

S /675 cont./
582 of consanguineous marriages. More important, undoubtedly than the
143 above two will be the factors of the decrease of endogamy by the
[162] dissolution of social barriers, although the prejudice against misalliances seems as long-lived as the human species.

Whether sudden or progressive, this social revolution, furthered by education, will sooner or later bring about the development of means of communication and the emancipation
S of the woman as well as of the man, for its is often the parents who
[584] choose the bride, rather than the future bridegroom.

In addition, one notes among the Wolof a smaller proportion of consanguineous marriages in the ports than in the villages.
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As in Europe, but for different reasons, this evolution will result in the "breakup of the isolates," the social and ethnic frontiers going back to those of the nation.

Conclusion

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143 The demographic inquiry by sampling carried out in the valley of the Senegal has made it possible to measure endogamy on the basis of the frequency of consanguineous marriages and the mean coefficient of consanguinity. The figures obtained are by far the highest that are now known for populations of such numerical importance. This peculiarity causes the populations concerned to evolve under very special biological circumstances which are not without reverberations on their demographic condition. (See Sutter [16].) An investigation in this direction is being pursued.

The genetic aspect of the situation should no longer be ignored, and anthropologists concerned with the mechanism of the differentiation of human types will find the material for taking into consideration the intervention of a factor which is also important.

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/See the foreign text for the bibliography on p. 676 of the original text./